+1(253)-509-8511
matt.sulli@outlook.com

Matthew Sullivan

Electrical Engineer

github.com/mattsul
mattsul.github.io

Summary of Qualifications:

- Strong in project development and documentation
- Experienced in electric circuits, software development, technical drawing, and data analysis
- Demonstrated performance as a team player and independent worker with analytical skills
- Hands-on experience in R, Python, Java, MATLAB, JavaScript, Git, PSpice, SQL, and Verilog
- Proven flexible problem solver with strong written and verbal communication skills

Education

University of Washington , Seattle, WA — Graduated June 2021
Bachelor of Science in Electrical and Computer Engineering — 3.4/4.0

Professional Experience

Engineering Design Instructor, University of Washington — **Apr 2021 — Jun 2021**

- Taught 20 freshmen engineering design, schematic design, Arduino, and computer aided design
- Organized, managed, and supported technical issues in all project phases including designing, developing, and testing
- Helped students plan and manage various projects to meet goals within budget
- Implemented effective communication methodologies, maintained documentation, and prepared reports for management

Front End Web Developer, Virtual Capstone — **Jan 2021 — Jun 2021**

- Created and released a scalable open-source web application to provide prognostics data sets as per requirements
- Conducted tests and improved website design for responsiveness, clarity, and effectiveness
- Managed schedule, deliverables, risks, resources, and stakeholders
- Organized, collected, and implemented weekly performance feedback from stakeholders to improve product

Research Assistant, University of Washington — **Jun 2020 — Apr 2021**

- Led research and developed of an acoustic assessor for a new online hearing test while resolving research challenges
- Collected, analyzed, and evaluated audio data, revealing 87% accuracy of the true noise floor
- Documented recurring research problems, wrote software design guidelines and instruction manuals on application usage

Sandwich Artisan, Subway — **Jul 2020 — Sep 2020**

- Operated the store as the sole employee on shift
- Greeted and served customers while cleaning, preparing food, and maintaining safety guidelines
- Reported inventory and daily reports to manager

Research Assistant, Sensor, Energy, and Automation Laboratory — **Dec 2017 — Jun 2018**

- Created documentation including bill of materials, material definition, dimensions, tolerances, and technical drawings
- Identified technical issues and designed, etched, soldered, and printed circuit boards to minimize 83% of total noise
- Composed instruction manuals on data collections, data analysis, and prototype processes

Courses and Leadership

CSE 446: Machine Learning, University of Washington — **Mar 2021 — Jun 2021**

- Designed machine learning algorithms from scratch including Ridge/LASSO and Logistic regression, neural networks, convolutional neural networks, principal component analysis, K-means, and gradient/stochastic gradient descent
- Analyzed data and reported defeciencies in my algorithsm compared to popular Python libraries

CSE 416: Introduction to Machine Learning, University of Washington — **Jun 2020 — Aug 2020**

- Designed and analyzed machine learning algorithms in Python as well as identified deficiencies in algorithm design
- Analyzed data and summarized findings using scikit-learn, Keras, TensorFlow, and PyTorch

EE 416: Random Signals for Communication and Signal Processing University of Washington — **Sep 2020 — Dec 2020**

- Simulated and optimized the dynamic multi-channel access problem using reinforcemnt learning
- Trained model received an 84% packet transmission success using the Deep Q Network with Experience Replay algorithm and epsilon greedy policy

EE 233: Circuit Theory I/II, University of Washington — **Sep 2019 — Dec 2019**

- Developed a analog 3-channel audio mixer using passive components
- Documented theory, designed schematics in PSpice, read component datasheets, and tested design using standard electronic testing equipment